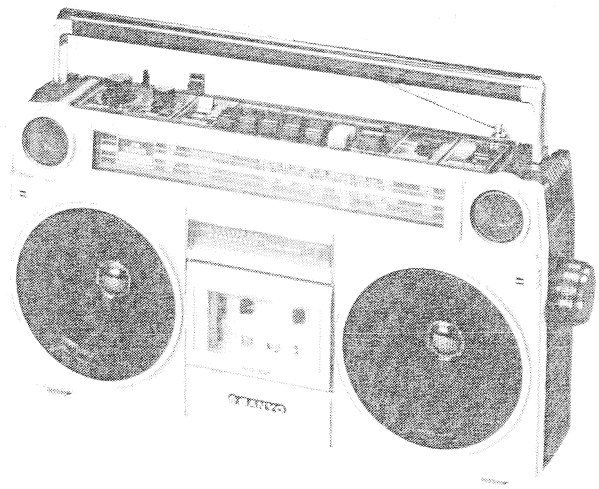
SERVICE MANUAL

SANYO

PORTABLE STEREO RADIO CASSETTE RECORDER

M9916LU



SPECIFICATIONS

Power Source
- AC ..... 115/230V (50/60 Hz)
- DC ..... 6 x 1.5V (IEC R20)

Output Power
- SP Impedance ..... 4 ohm
- 10% T.H.D ..... 2.0W x 2

Power Consumption ..... 11 W

RADIO SECTION

Frequency range
- LW ..... 150 — 270 kHz
- MW ..... 520 — 1620 kHz
- SW ..... 6.0 — 18.0 MHz
- FM ..... 87.5 — 108 MHz

Usable sensitivity
- LW(IHF) ..... 700 μV/m
- MW(IHF) ..... 250 μV/m
- SW(IHF) ..... 50 μV
- FM(DIN) ..... 5 μV

FM Stereo Separation (1 kHz) ..... 40 dB

CASSETTE SECTION

Tape Speed ..... 4.75 cm/sec ±3%
Wow & Flutter ..... 0.3% (DIN WTD REC-PLAY)
Fast Forward Time ..... 130 sec. (C-60 cassette)
Rewind Time ..... 130 sec. (C-60 cassette)
Recording System ..... AC Bias
Erasing System ..... DC Erasing
Frequency response ..... 100 — 8,000 Hz
Signal to Nosise Ratio ..... Better than 45 dB
Channel Separation ..... Better than 50 dB
Crosstalk ..... Better than 55 dB

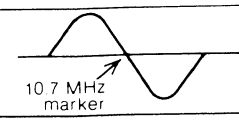
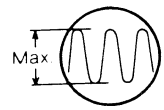
Terminal Impedance
- MIC ..... 600 ohm — 50 k ohm
- Ext. Speaker ..... 4 ohm
- Headphones ..... 8 ohm
- DIN Socket ..... 0.2 mV/k ohm

"Note" : The above mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

ALIGNMENT PROCEDURES

FM ALIGNMENT

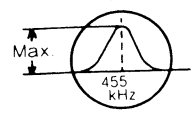
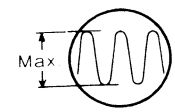
Standard test frequency 400 Hz and deviation 22.5 kHz

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT				
1	Calibration of IF	Place ouptut of gene-scope on TP1 (C7).	Connect input terminal of gene-scope to TP2.	10.7 MHz	Lowest end	Turn T1 and T2	
2	Calibration of Tuning Range	Connect signal generator to antenna terminal (J1) through dummy antenna.	Connect VTVM with 4 ohm dummy load and oscilloscope to Ext. speaker terminal.	87.4 MHz		L4	Obtain sine-curve and maximum amplitude. 
3				108.3 MHz	Highest end	CT2 (PVC)	
4	Adjustment of Tracking			90 MHz	90 MHz	L2	
5				106 MHz	106 MHz	CT1 (PVC)	
6	Repeat the above adjustments.						

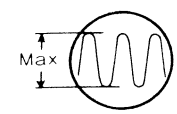
* Use a screwdriver with plastic grip for all adjustment.

MW ALIGNMENT

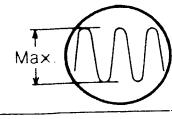
Standard test frequency 400 Hz and modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT				
1	Calibration of IF for AM	Connect standard loop antenna to output terminal of gene-scope. Place bar antenna 60 cm away from loop antenna.	Connect input terminal of gene-scope to R16.	455 kHz	Lowest end	T3 and T4	Obtain symmetrical curve and maximum amplitude. 
2	Adjustment of IF Gain						
3	Calibration of Tuning Range	Connect standard loop antenna to output of signal generator. Place bar antenna 60 cm away from loop antenne.	Connect VTVM with 4 ohm dummy load and oscilloscope to Ext. speaker terminal.	515 kHz		L9	Obtain sine-wave of 400 Hz and maximum amplitude. 
4				1650 kHz	Highest end	CT3(PVC)	
5	Adjustment of Tracking			600 kHz	600 kHz	L6 (MW bar ant. coil)	
6				1400 kHz	1400 kHz	CT7	
7	Repeat the above adjustments.						

LW ALIGNMENT

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	Connect standard loop antenna to output of signal generator. Place bar antenna 60 cm away from loop antenna.	Connect VTVM with 4 ohm dummy load and oscilloscope to Ext. speaker terminal.	145 kHz	Lowest end	L8	Obtain sine-wave of 400Hz and maximum amplitude. 
2				280 kHz	Highest end	CT5	
3	Adjustment of Tracking			150 kHz	150 kHz	L5 (LW bar ant. coil)	
4				270 kHz	270 kHz	CT6	
5	Repeat the above adjustments.						

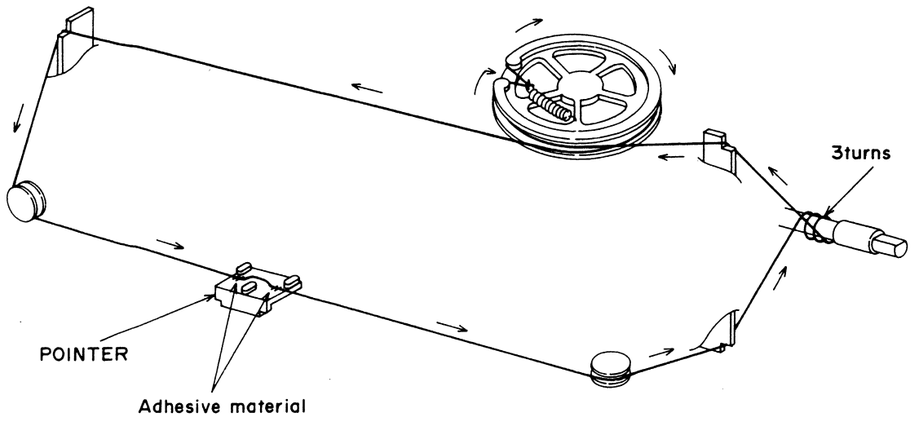
SW ALIGNMENT

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	Connect signal generator to antenna terminal (J1) through dummy antenna.	Connect VTVM with 4 ohm dummy load and oscilloscope to Ext. speaker terminal.	5.8 MHz	Lowest end	L10	Obtain sine-wave of 400 Hz and maximum amplitude. 
2				19.0 MHz	Highest end	CT4(PVC)	
3	Adjustment of Tracking			6.0 MHz	6.0 MHz	L7	
4				18.0 MHz	18.0 MHz	CT8	
5	Repeat the above adjustments.						

FM MPX ALIGNMENT

Step	Alignment	Connections		Tuning Dial Setting	Adjustment	Remarks
		INPUT	OUTPUT			
1		Connect TP2 to the GND.	Connect Frequency counter to TP3. 12 PIN (IC2).	—	SVR1	Obtain 19 kHz on the frequency

DIAL CORD STRINGING



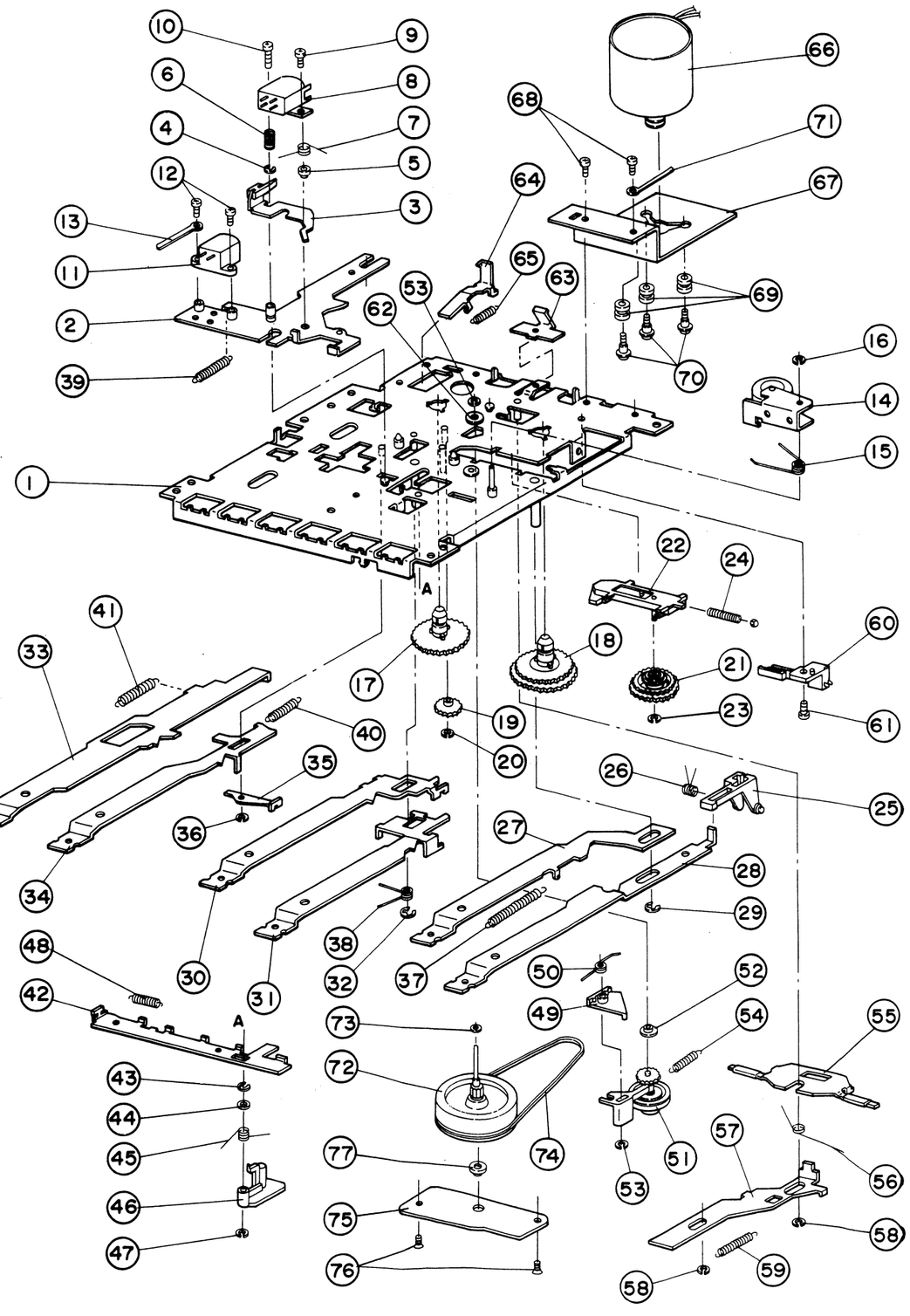
NOTE) Pointer : Lowest end and o" point at same time.
Rope : 0.5φ x 1056mm (effective 956mm).

PARTS LIST (CASSETTE MECHANISM)

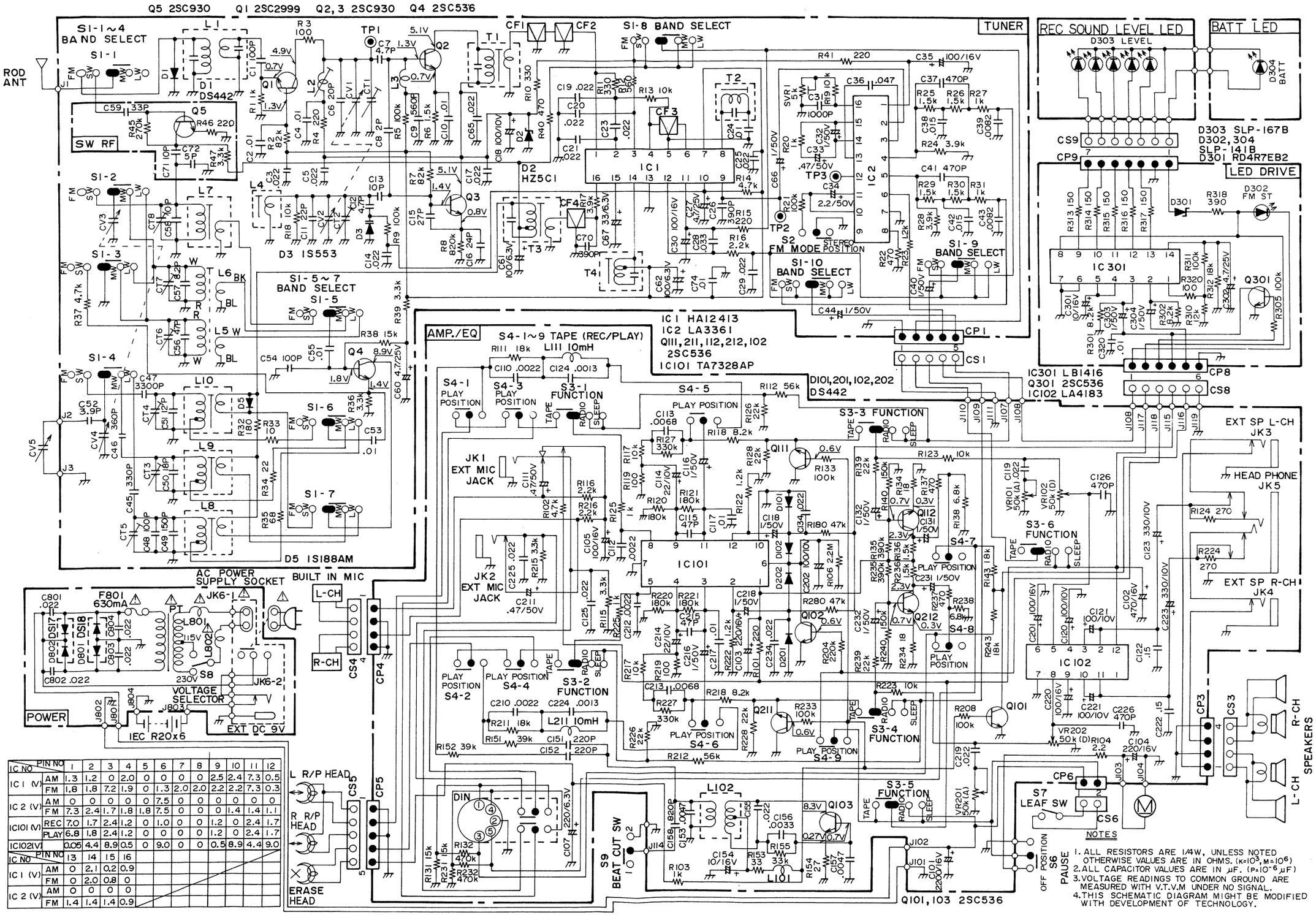
Key No.	Ref.No.	PARTS No.	DESCRIPTION	Q'ty
CASSETTE MECHANISM (R-S872534)				
1		R-A76049	Chassis assembly	1
2		R-A76050	Head panel assembly	1
3		R-A76051	Sensor lever assembly	1
4			E ring, 2.0	1
5		R-2470084	Sleeve, R/P head	1
6		R-1570955	Spring, Azimuth	1
7		R-1570956	Spring, Sensor lever	1
8		R-S07400	R/P head	1
9			Screw, Pan Hd., S-tight, 2x6	1
10			Screw, Pan Hd., (+, −), 2x5	1
11		R-S07265	Erase head	1
12			Screw, Pan Hd., S-tight, 2x6	2
13		R-S17479	Cord clip, Lead wire	1
		R-S27298-5	Housing, 5P	1
		R-247755	Terminal, Housing	5
14		R-A76052	Pinch roller assembly	1
15		R-1570957	Spring, Pinch roller	1
16		R-3972423	Nylon push, 2.0, Pinch roller lever	1
17		R-A76053	Rewind reel assembly	1
18		R-A76054	Supply reel assembly	1
19		R-3974129	Mid gear, Rewind	1
20		R-3973933	Nylon push, 1.5, Mid gear	1
21		R-A76055	Idler assembly, Play	1
22		R-A76056	Holder assembly, Play idler	1
23		R-3973933	Nylon push, 1.5, Idler	1
24		R-1570960	Spring, Idler	1
25		R-3974128	Lift up lever, Eject	1
26		R-1570958	Spring, Eject	1
27		R-1273005	Stop lever	1
28		R-1273006	Eject lever	1
29			E ring, 3.0	1
30		R-1273007	Rewind lever	1
31		R-1273008	FF lever	1
32			E ring, 3.0	1
33		R-1273009	REC lever	1
34		R-1273010	PLAY lever	1
35		R-1273011	C.R lever	1
36		R-3974066	Nylon push, 2.5, Play CR lever	1
37		R-1570961	Spring, Stop lever	1
38		R-1570962	Spring, FF/Rewind lever	1
39		R-1570963	Spring, Head panel - Play lever	1
40		R-1570964	Spring, Play lever	1
41		R-1570965	Spring, REC lever	1
42		R-1273012	Lock lever	1
43			E ring, 1.5	1
44			Flat washer, Metal, 2.3x6xt0.4	1
45		R-1570968	Spring, Auto stop arm	1
46		R-3974138	Auto stop arm	1
47		R-3973933	Nylon push, 1.5, Auto stop arm	1
48		R-1570969	Spring, Lock lever	1
49		R-3974134	Select lever, FF/Rewind idler	1
50		R-1570966	Spring, FF/Rewind idler	1
51		R-A76057	Idler assembly, FF/Rewind	1
52		R-3974137	Sleeve, FF/Rewind idler	1
53		R-3973933	Nylon push, 1.5, FF/Rewind idler	2
54		R-1570967	Spring, FF/Rewind idler	1
55		R-A76058	Brake lever assembly	1
56		R-1570971	Spring, Reel brake	1
57		R-1273014	Brake sub lever, Reel brake	1
58		R-3974066	Nylon push, 2.5, Brake sub lever	2
59		R-1570970	Spring, Brake sub lever	1
60		R-S47683	Leaf switch, Power	1
61			Screw, Bind Hd., B-tight, 2x5	1
		R-S27298-2	Housing, 2P	1
		R-247755	Terminal, Housing	2
62		R-3974324	Washer, t0.5, FF/Rewind idler	1
63		R-137163	Cassette holder	1
64		R-1273016	REC SAFETY lever	1
65		R-1570972	Spring, REC SAFETY lever	1
66		R-S57225	Motor	1
67		R-1273015	Motor bracket	1
68			Screw, Pan Hd., S-tight, 2.6x5	2
69		R-4470398	Spacer, Motor	3
70		R-1570954	Special screw	3
71		R-S17269	Cord clip	1
72		R-A76059	Flywheel assembly	1
73			Thrust washer, Metal, 2x0.25	1
74		R-4470397	Belt	1
75		R-1273017	Flywheel bracket	1
76			Screw, Oval Hd., 2.6x6	2
77		R-3974140	Flywheel support	1

NOTES : 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

EXPLODED VIEW (CASSETTE MECHANISM)



SCHEMATIC DIAGRAM



IC NO	PIN NO	1	2	3	4	5	6	7	8	9	10	11	12
IC1 (V)	AM	1.3	1.2	0	2.0	0	0	0	0	2.5	2.4	7.3	0.5
	FM	1.8	1.8	7.2	1.9	0	1.3	2.0	2.0	2.2	2.2	7.3	0.3
IC2 (V)	AM	0	0	0	0	7.5	0	0	0	0	0	0	0
	FM	7.3	2.4	1.7	1.8	7.5	0	0	0	1.4	1.4	1.1	
IC101 (V)	REC	7.0	1.7	2.4	1.2	0	1.0	0	0	1.2	0	2.4	1.7
	PLAY	6.8	1.8	2.4	1.2	0	0	0	0	1.2	0	2.4	1.7
IC102 (V)		0.05	4.4	8.9	0.5	0	9.0	0	0	0.5	8.9	4.4	9.0

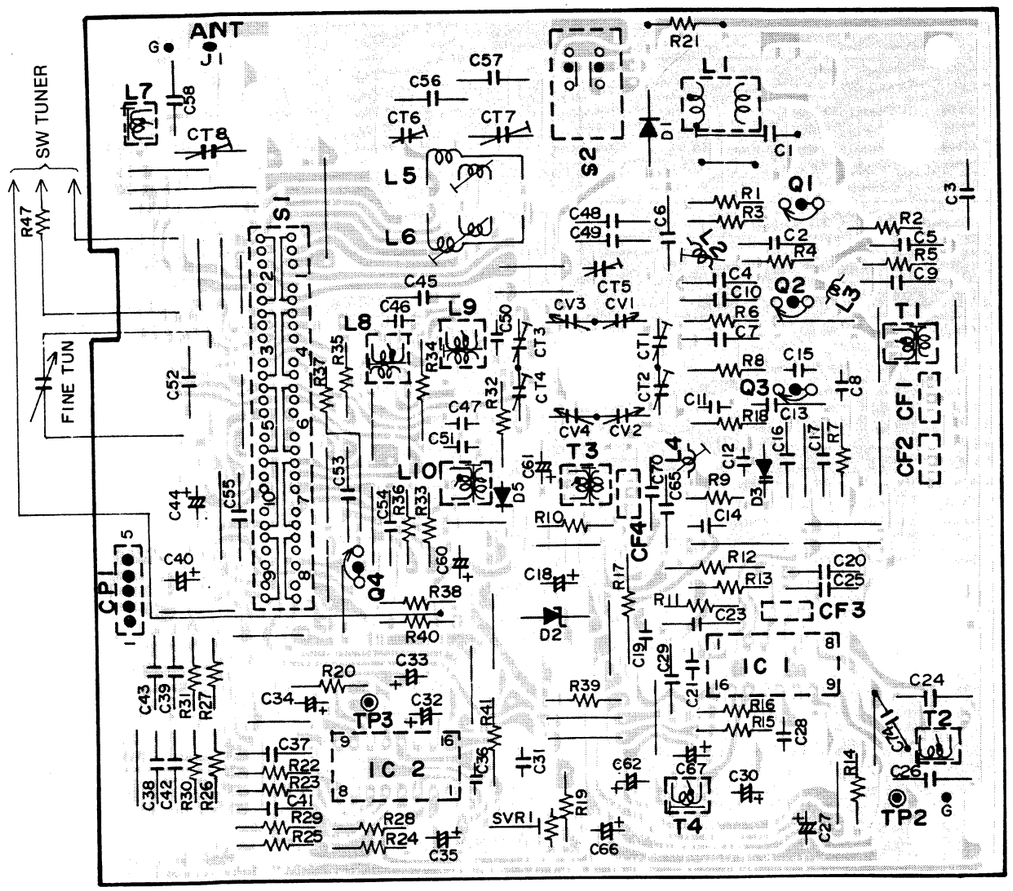
IC NO	PIN NO	13	14	15	16
IC1 (V)	AM	0	2.1	0.2	0.9
	FM	0	2.0	0.8	0
IC2 (V)	AM	0	0	0	0
	FM	1.4	1.4	1.4	0.9

NOTES

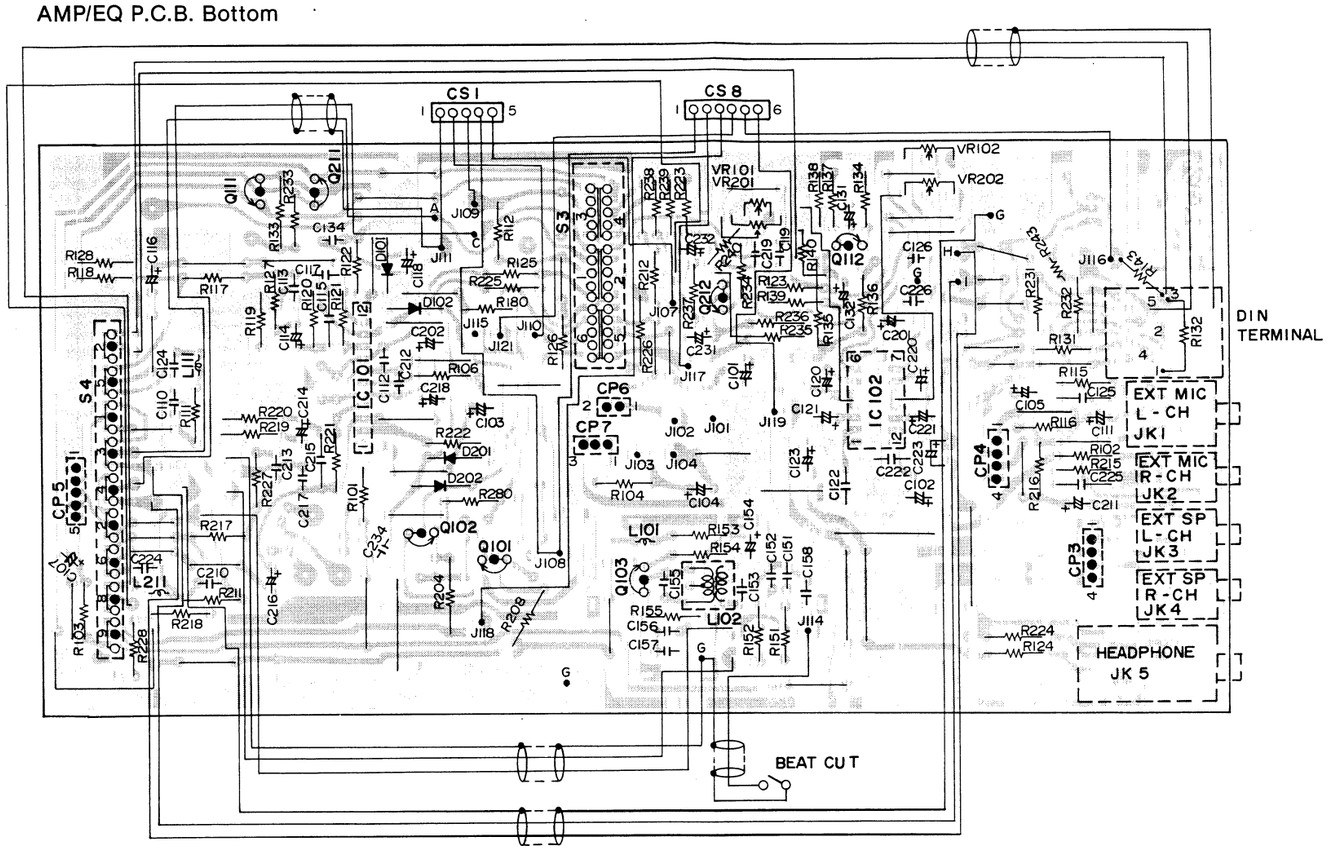
1. ALL RESISTORS ARE 1/4W, UNLESS NOTED OTHERWISE VALUES ARE IN OHMS. (K=10^3, M=10^6)
2. ALL CAPACITOR VALUES ARE IN μF. (P=10^{-6} μF)
3. VOLTAGE READINGS TO COMMON GROUND ARE MEASURED WITH V.T.V.M UNDER NO SIGNAL.
4. THIS SCHEMATIC DIAGRAM MIGHT BE MODIFIED WITH DEVELOPMENT OF TECHNOLOGY.

WIRING DIAGRAM

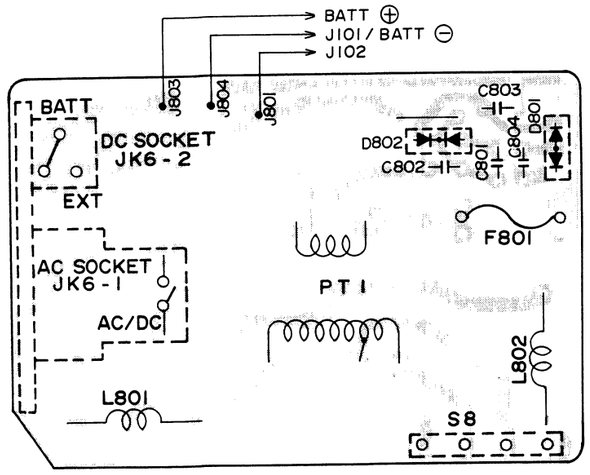
TUNER P.C.B. Bottom



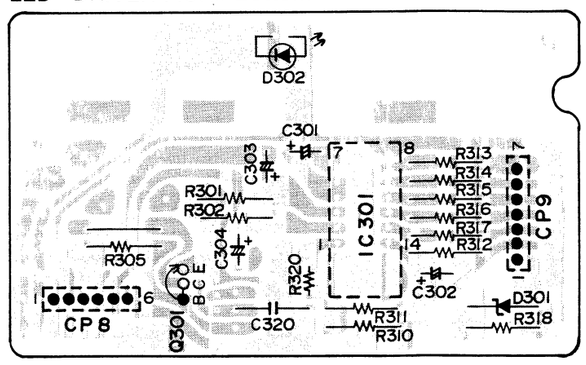
AMP/EQ P.C.B. Bottom



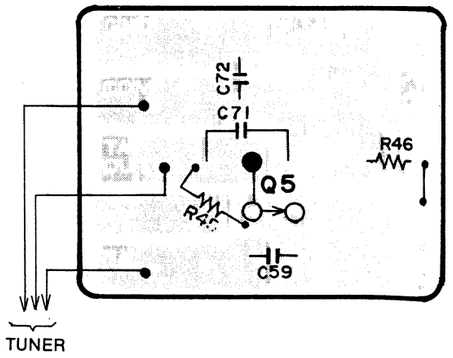
POWER SUPPLY P.C.B. Bottom



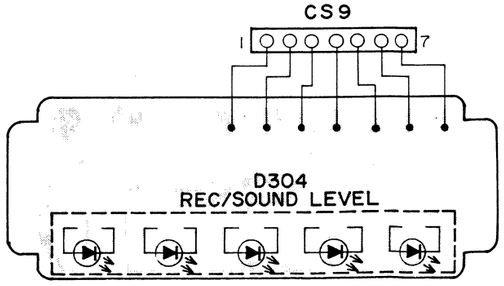
LED DRIVER P.C.B. Bottom



SW TUNER P.C.B. Bottom

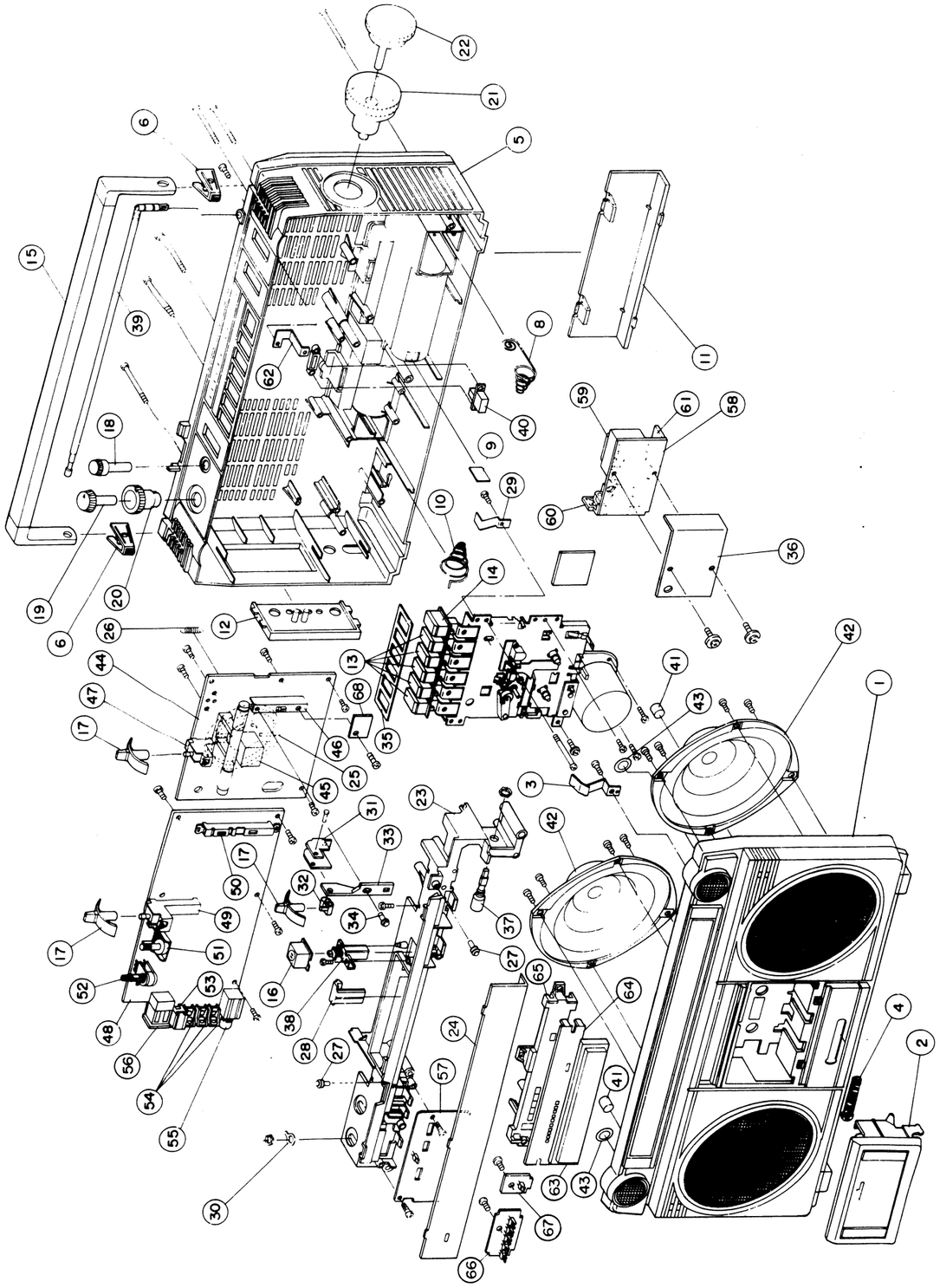


REC SOUND LEVEL LED P.C.B. Bottom



BATT LED P.C.B. Bottom

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

Key No.	Ref.No.	PART No.	DESCRIPTION	Q'ty
			PACKAGE PARTS	
		R-357556	Polyethylene bag, AC cord	1
		R-357543	Polyethylene bag, Set	1
		R-4776679	Instruction book	1
		R-4174268	Styro-foam cushion, Set rigtht	1
		R-4174269	Styro-foam cushion, Set left	1
		R-4076337-2	Individual carton	1
		R-4776063	Attention sheet	1
			ACCESSORY PARTS	
		⚠ R-S37123-1	AC cord	1
		R-S07193-1	Magnetic tape, C-10	1
			CABINET APPEARANCE PARTS	
1		R-A77747	Panel assembly, Front	1
2		R-A77748	Cassette lid assembly	1
3		R-137180	Spring metal, Cassette lid	1
			Tap. Screw, Pan Hd., P-tight, 3x8	1
4		R-3974279	Badge	1
5		R-A78091	Rear cover assembly	1
62		R-237204	Earth plate, Rod antenna	1
8		R-1571052	Coil spring, Battery terminal, +, −	1
9		R-237205	Battery terminal plate, +	1
10		R-1571053	Coil spring, Battery terminal −	1
11		R-A76677	Battery cover assembly	1
12		R-327545	Fix plastic board, External terminal	1
13		R-327520	Knob, STOP/FFWD/REW/ PLAY/EJECT	5
14		R-327520-L	Knob, REC	1
16		R-327521	Knob, PAUSE	1
17		R-327522	Knob, FUNCTION/FM MODE/ BAND SELECT	3
18		R-327523	Knob, TONE	1
19		R-327524	Knob, VOLUME R	1
20		R-327525	Knob, VOLUME L	1
21		R-327526	Knob, TUNING	1
22		R-327527	Knob, FINE TUNING	1
15		R-S872801	Handle assembly	1
6		R-3974690	Hinge, Handle mtg.	2
63		R-327633	Clear window	1
64		R-1274086	Decoration metal, Holder	1
65		R-327634	Holder, Clear window	1
			Tap. Screw, Pan Hd., P-tight, 3x8	3
			CHASSIS MECHANICAL PARTS	
23		R-317818	Chassis	1
24		R-1273932-2	Dial scale	1
25		R-3974244	Drum	1
			Tap. Screw, Pan Hd., With washer "A", 2.6x6	1
26		R-157189	Coil spring, Drum	1
			Dial cord string, ø0.5x1056L	1
27		R-S872351	Pulley assembly	2
28		R-327518	Pointer	1
29		R-137164	Spring metal, REC lever	1
			Screw, Pan Hd., S-tight, 2.6x4	1
30		R-247929	Washer, VOLUME earth	1
31		R-1273118	Metal bracket, Band select	1
			Screw, Pan Hd., With washer, B-tight, 2.6x6	1
32		R-3974245	Arm, Band select	1
33		R-3974246A	Lever, Band select	1
34		R-1571572	Special screw, Slide SW-Lever	1
			Rivet, Flat Hd., Tubular, 2.3x14	1
35		R-437445	Sheet, Cassette knob	1
36		R-367307A	Cover, Power supply P.C.B.	1
			CHASSIS ELECTRICAL PARTS	
37	CV5	R-C1743	Variable capacitor	1
38	S6	R-S47351-2	Push switch, PAUSE	1
			Screw, Pan Hd., 2.6x8, B-tight	1

Key No.	Ref.No.	PART No.	DESCRIPTION	Q'ty
40	S9	R-S4303	Slide switch, BEAT CUT	1
			Screw, Flat Hd., 2x10	2
39		R-S17478	Rod antenna	1
41		R-S07379	Microphone	2
42		R-S07380	Speaker, Woofer	2
43		R-A76106	} or Speaker assembly, Tweeter	2
		R-A76106-2		
		R-S17269	Cord clip	2
		R-S17399	Wire tie	3
		R-237113	Lug	1
66		R-4174299-1	Printed circuit board, REC SOUND LEVEL LED	1/2
67		R-4174299-2	Printed circuit board, BATT LED	1/2
	CS1	R-S27298-5	Housing, 5P	1
	CS3,4	R-S27298-4	Housing, 4P	2
	CS8	R-S27298-6	Housing, 6P	1
	CS9	R-S27298-7	Housing, 7P	1
		R-247755	Terminal, Housing	26
			SEMICONDUCTORS	
	D302,304		LED, SLP-141B	2
	D303		LED, SLP-167B	1
			TUNER P.C.B. ASSEMBLY	
44		R-A78092	Circuit board assembly, Tuner	1
45	CV1~4 CT1,2,4,5	R-C1740-2	Variable capacitor	1
	L1	R-W27204	Antenna coil	1
	L2	R-W9701	VHF coil	1
	L3	R-W9724	VHF coil	1
	L4	R-W9747	VHF coil	1
	L5,6	R-W27207	Antenna coil	1
	L7	R-W27179	Antenna coil	1
	L8	R-W87062	OSC coil	1
	L9	R-W87044-1	OSC coil	1
	L10	R-W87054A	OSC coil	1
	T1	R-W5T766-1	IF transformer	1
	T2	R-W5T7045	IF transformer	1
	T3	R-W5T7030	IF transformer	1
	T4	R-W5T7031	IF transformer	1
	CF1,2,3	R-S17487	Ceramic filter	3
	* Do not use ceramic filter from different rank but a same rank.			
	CF4	R-S17486	Ceramic filter	1
	CT3,6	R-C0738	Trimmer	2
	CT7,8	R-C0740	Trimmer	2
	SVR1	R-R110729	Preset resistor, 5 k ohm	1
46	S1	R-S47691	Slide switch, BAND SELECT	1
47	S2	R-S47690	Lever switch, FM MODE	1
	CP1	R-S27207-5	Plug, 5P	1
			SEMICONDUCTROS	
	IC1		IC, HA12413	1
	IC2		IC, LA3361	1
	Q1		Transistor, 2SC2999	1
	Q2,3		Transistor, 2SC930	2
	Q4		Transistor, 2SC536	1
	D1		Diode, DS442	1
	D2		Zener diode, HZ5C1	1
	D3		Diode, 1S553	1
	D5		Diode, 1S188 AM	1
			RESISTORS	
	(Resistors are of carbon type. ±5% allowance and 1/4W unless otherwise noted.)			
	R1,20,27,31		1 k ohm	4
	R2,7		82 k ohm	2
	R3		100 ohm	1
	R4,15,41		220 ohm	3
	R5,9,21		100 k ohm	3
	R6,25,26,29,30		1.5 k ohm	5
	R8		820 ohm	1
	R10,11		330 ohm	2
	R12		560 ohm	1
	R13,18		10 k ohm	2
	R14,37		4.7 k ohm	2
	R16		2.2 k ohm	1
	R22,40		470 ohm	2
	R23		1.2 k ohm	1
	R17,24,28		3.9 k ohm	3
	R32		180 ohm	1
	R33		10 ohm	1

NOTES : 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref.No.	PART No.	DESCRIPTION	Q'ty
	R34		22 ohm	1
	R36,39		3.3 k ohm	2
	R38		15 k ohm	1
	R35		68 ohm	1
			CAPACITORS	
	C1		Ceramic, 100pF, ±5%, 50V, SL	1
	C6		Ceramic, 20pF, ±5%, 50V, SL	1
	C58		Ceramic, 10pF, ±5%, 50V, SL	1
	C15		Ceramic, 27pF, ±5%, 50V, SL	1
	C16		Ceramic, 24pF, ±5%, 50V, SL	1
	C56		Ceramic, 47pF, ±5%, 50V, SL	1
	C7		Ceramic, 4.7pF, ±10%, 50V, SL	1
	C52		Ceramic, 3.9pF, ±10%, 50V, SL	1
	C57		Ceramic, 8.2pF, ±10%, 50V, SL	1
	C8		Ceramic, 2pF, ±0.25pF, 50V, SL	1
	C53,55		Ceramic, 0.01mfd, ±20%, 25V, X	2
	C38,42		Ceramic, 0.015mfd, ±20%, 25V, X	2
	C3,5,17,20.23,25,29,65		Ceramic, 0.022mfd, ±30%, 16V, X	8
	C2,4,10,24,75		Ceramic, 0.01mfd, +80 −20%, 16V, X	5
	C9		Ceramic, 560pF, ±10%, 50V, B	1
	C26,70		Ceramic, 390pF, ±10%, 50V, B	2
	C37,41		Ceramic, 470pF, ±10%, 50V, B	2
	C45		Ceramic, 330pF, ±10%, 50V, B	1
	C47		Ceramic, 3300pF, ±10%, 50V, B	1
	C12		Ceramic, 5.0pF, ±10%, 50V, C	1
	C14,19,21		Ceramic, 0.022mfd, +80 −20%, 50V, Z	3
	C31		Ceramic, 1000pF, ±5%, 50V, S	1
	C28		Mylar, 0.033mfd, ±10%, 50V	1
	C36		SBL ceramic, 0.047mfd, ±20%, 25V	1
	C46		Styrol, 360pF, ±5%, 50V	1
	C30,35		Electrolytic, 100mfd/16V	2
	C18		Electrolytic, 100mfd/10V	1
	C67		Electrolytic, 33mfd/6.3V	1
	C27,60		Electrolytic, 4.7mfd/25V	2
	C32,40,44,66		Electrolytic, 1mfd/50V	4
	C33		Electrolytic, 0.47mfd/50V	1
	C61		Electrolytic, 220mfd/16V	1
	C34		Electrolytic, 2.2mfd/50V	1
	C62		Electrolytic, 100mfd/6.3V	1
	C39,43		Ceramic, 0.0082mfd, ±20%, 50V	2
	C13		Ceramic, 10pF, ±5%, 50V, C	1
	C54		Ceramic, 100pF, ±5%, 50V, SL	1
	C48		Ceramic, 100pF, ±10%, 50V, C	1
	C49		Ceramic, 150pF, ±5%, 50V, C	1
	C50		Ceramic, 18pF, ±10%, 50V, W	1
	C51		Ceramic, 12pF, ±0.5%, 50V, X	1
	C11		Ceramic, 22pF, ±5%, 50V, C	1
			AMP/EQ P.C.B. ASSEMBLY	
48		R-A78093	Cicuit board assembly, Amp/EQ	1
49	S3-1∿6	R-S47824	Lever switch	1
50	S4-1∿9	R-S47740	Slide switch	1
51	VR101,201	R-R1167353	Rotary VR, 50k-A	1
52	VR102,202	R-R1167354	Rotary VR, 50k-D	1
53	J1-1∿2	R-S27289-1	Jack, Mic	1
54	J2,3,4	R-S27290-1	Jack, Mic and SP	3
55	J5	R-S27438-1	Headphone jack	1
56		R-S27303	DIN socket, 5P	1
	L102	R-W87055	OSC coil	1
	L101,111, 211	R-W67029	Choke coil, 10mH	3
	CP5	R-S27260-5	Plug, 5P	1
	CP3,4	R-S27207-4	Plug, 4P	2
	CP6	R-S27207-2	Plug, 2P	1
			SEMICONDUCTORS	
	IC101		Integrated circuit, TA7328 AP	1
	IC102		Integrated circuit, LA4183	1
	Q101		Transistor, 2SC536	1
	Q102,103		Transistor, 2SC536	2
	Q111,112,211,212		Transistor, 2SC536	4
	D101,102,201,202		Diode, DS442X	4

Key No.	Ref.No.	PART No.	DESCRIPTION	Q'ty
			RESISTORS	
	(Resistors are of carbon type, ±5% allowance and 1/4W unless otherwise noted.)			
	R101		220 ohm	1
	R102		4.7 k ohm	1
	R103,125,225		1 k ohm	3
	R104		2.2 ohm	1
	R204		220 k ohm	1
	R133,208,233		100 k ohm	3
	R138,238		6.8 k ohm	2
	R115,215		3.3 k ohm	2
	R106		2.2 M ohm	1
	R151,152		39 k ohm	2
	R153		33 ohm	1
	R154		27 ohm	1
	R155		33 k ohm	1
	R108,116,216		2.2 k ohm	3
	R117,123,217,223		10 k ohm	4
	R118,218		8.2 k ohm	2
	R119,219		100 ohm	2
	R120,121,220,221		180 k ohm	4
	R111,211,143		18 k ohm	3
	R112,212		56 k ohm	2
	R134,234		18 ohm	2
	R122,222		1.2 k ohm	2
	R124,224		270 ohm	2
	R126,139,226,239,128,228		22 k ohm	6
	R127,227		330 k ohm	2
	R180,280		22 k ohm	2
	R131,231		15 k ohm	2
	R132,232		470 k ohm	2
	R136,236		1.5 k ohm	2
	R137,237		470 ohm	2
	R135,235		390 k ohm	2
	R140,240		150 k ohm	2
	R243		18 k ohm	1
			CAPACITORS	
	C110,112,210,212		SBL cermic, 0.0022mfd, ±10%, 25V	4
	C113,213		SBL ceramic, 0.0068mfd, ±10%, 25V2	
	C117,217		SBL ceramic, 0.01mfd, ±10%, 25V	2
	C119,219		SBL ceramic, 0.022mfd, ±20%, 25V	2
	C124,224		Styrol, 0.0013mfd, ±5%, 50V	2
	C153		Mylar, 0.0047mfd, ±5%, 50V	1
	C155		Mylar, 0.022mfd, ±10%, 50V	1
	C156		Mylar, 0.0033mfd, ±10%, 50V	1
	C157		Mylar, 0.0047mfd, ±10%, 50V	1
	C122,222		Mylar, 0.15mfd, ±20%, 50V	2
	C126,226		Ceramic, 470pF, ±10%, 50V, B	2
	C115,215		Ceramic, 47pF, ±5%, 50V, SL	2
	C151,152		Ceramic, 220pF, ±10%, 50V, B	2
	C125,225		Ceramic, 0.022mfd, ±30%, 16V, X	2
	C134,234		Ceramic, 0.022mfd, +80 −20%, 50V, Z	2
	C158		Ceramic, 820pF, ±10%, 50V, B	1
	C101		Electrolytic, 2200mfd/16V	1
	C123,223		Electrolytic, 330mfd/10V	2
	C120,121,202,220,221		Electrolytic, 100mfd/10V	5
	C107		Electrolytic, 220mfd/6.3V	1
	C105,201		Electrolytic, 100mfd/16V	2
	C103,104		Electrolytic, 220mfd/16V	2
	C116,118,131,132,216, 218,231,232		Electrolytic, 1mfd/50V	8
	C111,211		Electrolytic, 0.47mfd/50V	2
	C114,214		Electrolytic, 22mfd/10V	2
	C154		Electrolytic, 10mfd/16V	1
	C102		Electrolytic, 470mfd/16V	1
			LED DRIVER P.C.B. ASSEMBLY	
57		R-A78094	Circuit board assembly, LED Drive, W/O LED	1
	CP8	R-S27260-6	Plug, 6P	1
	CP9	R-S27260-7	Plug, 7P	1
			SEMICONDUCTORS	
	IC301		IC, LB1416	1

NOTES : 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Key No.	Ref.No.	PART No.	DESCRIPTION	Q'ty
	Q301		Transistor, 2SC536	1
	D301		Zener diode, RD4.7EB2	1
			RESISTORS	
	(Resistors are of carbon type, ±5% allowance and 1/4W unless otherwise noted.)			
	R301,302		8.2 k ohm	2
	R305,311		100 k ohm	2
	R310		12 k ohm	1
	R312		18 k ohm	1
	R313~317		150 ohm	5
	R318		390 ohm	1
	R320		100 ohm	1
			CAPACITORS	
	C320		Ceramic, 0.01mfd, +80 −20%, 16V, X	1
	C301		Electrolytic, 10mfd/16V	1
	C302		Electrolytic, 4.7mfd/25V	1
	C303,304		Electrolytic, 0.1mfd/50V	2
			POWER SUPPLY P.C.B. ASSEMBLY	
58		R-A78095	Circuit board assembly, Power supply	1
59	PT1 ⚠	R-W770097A	Power transformer	1
60	JK6 ⚠	R-S27474	Socket, AC jack/DC jack	1
61	S8 ⚠	R-S47700-2	Rotary switch, Voltage select	1
⚠	L801,802	R-W17072-1	Choke coil, 100μH	2
⚠	F801 ⚠	R-S17214	Fuse, 630mA	1
		R-S17024	Fuse clip	2
		R-257277	Socket pin	2
			SEMICONDUCTORS	
	D801		Diode, DS18	1
	D802		Diode, DS17	1
			CAPACITORS	
	C801~804		Ceramic, 0.022mfd, +80 −20%, 50V, Z	4
			SW TUNER P.C.B. ASSEMBLY	
68		R-A78281	Circuit board assembly, SW tuner	1
			SEMICONDUCTORS	
	Q5		Transistor, 2SC930	1
			RESISTORS	
	(Resistors are of carbon type, ±5% allowance and 1/4W unless otherwise noted.)			
	R45		270 k ohm	1
	R46		220 ohm	1
	R47		3.3 k ohm	1
			CAPACITORS	
	C59		Ceramic, 33pF, ±5%, 50V, SL	1
	C71		Ceramic, 10pF, ±0.5%, 50V, SL	1
	C72		Ceramic, 5pF, ±0.5%, 50V, SL	1

NOTES: 1. Part orders must contain Modwel Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

SANYO ELECTRIC TRADING CO., LTD.
33, Hiyoshi-cho 2, Moriguchi-shi,
Osaka-fu, 570, Japan.
Jun/'82/2000 YA
Printed in Japan.